AC2/PEN.DD

A.C. MAINS DOUBLE DIODE OUTPUT PENTODE

RATING.

Heater Voltage	4·0
Heater Current (Amps.)	2·0
Maximum Anode Voltage	250
Maximum Screen Voltage	250
Maximum Anode Dissipation (watts)	10·0
*Mutual Conductance (mA/V)	8·0

* Taken at Ea=100 ; Es=100 ; Eg=0.

TYPICAL OPERATION.

Anode Voltage	250
Screen Voltage	250
Grid Voltage	5·3
Anode Current (mA)	32·0
Screen Current (mA) (approx.)	6·0
Optimum Load Resistance (ohms)	6,700
Self-Bias Resistance (ohms)	140
*Maximum Undistorted Power Output (watts)	3·5
*Input Swing (Volts R.M.S.)	3·2
Delay Voltage	10·5

* For 5 per cent. Second Harmonic and Third Harmonic not exceeding 5 per cent.

DIMENSIONS.

Maximum Overall Length	146 mm.
Maximum Diameter	54 mm.

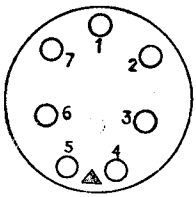
GENERAL.

The AC.2/PEN DD is an indirectly heated double diode output pentode for use in A.C. mains receivers. In operation the two diodes and the pentode are independent of each other except for the common cathode sleeve, and the two sections may be treated as two separate valves. The valve is fitted with a standard 7-pin base, the connexions to which are given overleaf.

APPLICATION.

The AC2/PEN DD is suitable for use in practically any circuit where delayed A.V.C. is required, and by its use it is possible to dispense with an intermediate L.F. stage. In order to obtain maximum power output, care should be taken to prevent R.F. voltages being applied to the grid of the pentode, and it is most satisfactory in practice to insert an H.F. choke between the diode anode and the diode load resistance. In addition a ·001 mfd. condenser is desirable between the anode and cathode of the pentode. A resistance of approximately 50 ohms should be inserted in the anode circuit, close to the anode pin, and the lowest reflected speech coil impedance should be equal to the optimum load. It is recommended that a delay voltage of the order of 10—15 should be employed. The resistance of the grid to cathode circuit should not exceed 1 megohm.

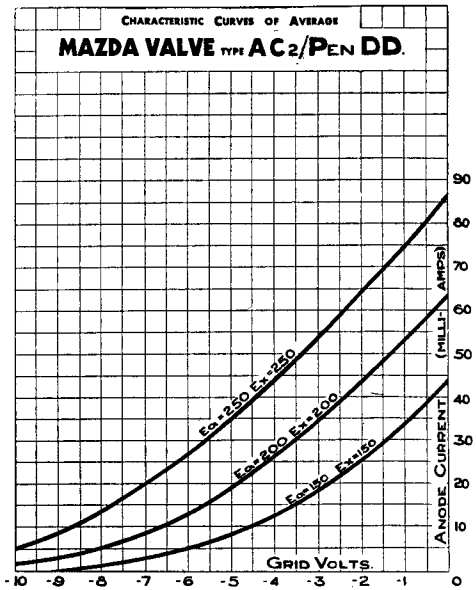
BASING.

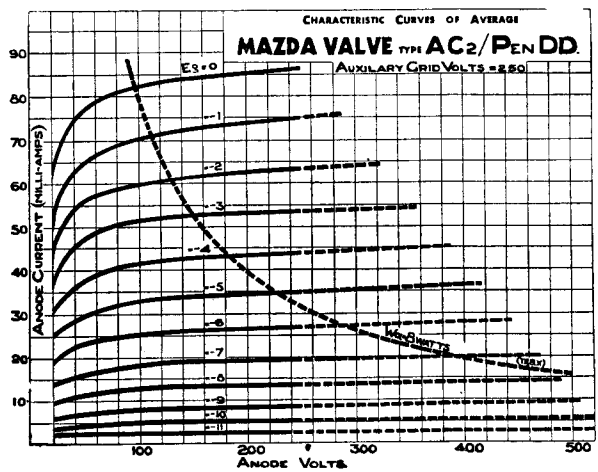


Viewed from the free end of the base.

Pin No. 1.	Diode 1.
2.	Anode.
3.	Diode 2.
4.	Heater
5.	Heater.
6.	Cathode.
7.	Screen.
Top Cap.	Control Grid.

MAZDA


CHARACTERISTIC CURVES OF AVERAGE
MAZDA VALVE TYPE AC2/PEN DD.
Eg=250 Ex=250
Eg=200 Ex=200
Eg=150 Ex=150
GRID VOLTS.
ANODE CURRENT (MILLI-AMPS)
-10 -9 -8 -7 -6 -5 -4 -3 -2 -1 0
10 20 30 40 50 60 70 80 90


CHARACTERISTIC CURVES OF AVERAGE
MAZDA VALVE TYPE AC2/PEN DD.
AUXILARY GRID VOLTS = 250
Es=0
-1
-2
-3
-4
-5
-6
-7
-8
-9
-10
-11
MAGNITUDE (VOLTS)
ANODE CURRENT (MILLI-AMPS)
100 200 300 400 500
ANODE VOLTS
10 20 30 40 50 60 70 80 90

Mazda Radio Valves are manufactured in Great Britain for the British Thomson-Houston Co., Ltd., London and Rugby, and distributed by

THE EDISON SWAN ELECTRIC CO., LTD.
155, CHARING CROSS ROAD, LONDON, W.C.2.

EDISWAN RADIO